This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

What is claimed is:

- 1. (Original) An isolated molecular complex comprising a proteoglycan and an isolated receptor protein for a myelin-derived-growth-inhibitory protein or a fragment thereof, wherein the receptor protein has a proteoglycan binding domain.
- 2. (Original) An isolated molecular complex of claim 1, wherein the myelin-derived-growth-inhibitory protein is selected from the group consisting of Nogo, MAG, and OMgp.
- 3. (Original) The isolated molecular complex of claim 1, wherein the proteoglycan is a heparan sulfate bearing proteoglycan.
- 4. (Original) The isolated molecular complex of claim 3, wherein the heparan sulfate is heparin.
- 5. (Original) The isolated molecular complex of claim 1, wherein the receptor protein is NgR1.
- 6. (Original) The isolated molecular complex of claim 1, wherein the receptor protein is NgR3.
- 7. (Original) A method of modulating neurite outgrowth comprising the step of contacting a neuron with an effective amount of the isolated receptor protein for a myelin-derived-growth-inhibitory protein comprising an amino acid sequence having less than 74% sequence homology to the amino acid sequence of SEQ ID NO:1, wherein the isolated receptor protein is contacted with a proteoglycan.
- 8. (Original) A method of modulating neurite outgrowth comprising the step of contacting a neuron with an effective amount of a glycosaminoglycan that binds an isolated receptor protein for a myelin-derived-growth-inhibitory protein comprising an amino acid sequence having less that 74% sequence homology to the amino acid sequence of SEQ ID NO:1.
- 9. (Original) A method of modulating neurite outgrowth comprising the step of contacting a neuron with an effective amount of a glycosaminoglycan that modulates binding of proteoglycans with an isolated receptor protein for a myelin-derived-growth-inhibitory protein comprising an amino acid sequence having less that 74% sequence homology to the amino acid sequence of SEQ ID NO:1.

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- 10. (Original) A method of modulating neurite outgrowth comprising the step of contacting a neuron with an agent that promotes or prevents sialic acid binding to a receptor for a myelin-derived-growth-inhibitory protein.
- 11. (Original) A method of treating a central nervous system disorder in a subject comprising administering to the subject an effective amount of an isolated receptor protein for a myelin-derived-growth-inhibitory protein comprising an amino acid sequence having less than 74% sequence homology to the amino acid sequence of SEQ ID NO:1.
- 12. (Original) The method of claim 11, further comprising administering an effective amount of a proteoglycan to the subject.
- 13. (Original) A method of treating a central nervous system disorder in a subject comprising administering to the subject an effective amount of a glycosaminoglycan that binds an isolated receptor for a myelin-derived-growth-inhibitory protein, wherein the isolated receptor protein comprises a domain with lectin activity.
- 14. (Original) A method treating a central nervous system disorder in a subject comprising administering to the subject an effective amount of a glycosaminoglycan that modulates binding of proteoglycans with an isolated receptor for a myelin-derived-growth-inhibitory protein, wherein the isolated receptor protein comprises a domain with lectin activity.
- 15. (Original) A method of treating a central nervous system disorder in a subject comprising administering to the subject an effective amount of an agent that promotes or prevents sialic acid binding to a receptor for a myelin-derived-growth-inhibitory protein.
- 16. (Original) A method of modulating neurite outgrowth comprising contacting a myelin-derived-growth-inhibitory protein with a first receptor for a myelin-derived-growth-inhibitory protein and a second receptor for a myelin-derived-growth-inhibitory protein.
- 17. (Original) The method of claim 16, wherein the first receptor is NgR1 and the second receptor is NgR2.
- 18. (Original) The method of claim 16, wherein the first receptor is NgR1 and the second receptor is NgR3.
- 19. (Original) The method of claim 16, wherein the first receptor is NgR2 and the second receptor is NgR3.
- 20. (Original) The method of claim 16, further comprising a third receptor for a myelin-derived-growth-inhibitory protein.
- 21. (Original) The method of claim 20, wherein the first receptor is NgR1, the second receptor is NgR2, and the third receptor is NgR3.

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- 22. (Original) A method of identifying a compound that inhibits the binding of myelin-derived-growth-inhibitory protein to two or more myelin-derived-growth-inhibitory protein receptors, the method comprising:
- a. providing two or more polypeptides comprising the ligand-binding domain of myelin-derived-growth-inhibitory protein receptors, but lacking the GPI anchor domain of myelin-derived-growth-inhibitory protein receptors;
- b. contacting the polypeptides with myelin-derived-growth-inhibitory protein and a test compound; and
- c. determining whether binding of a myelin-derived-growth-inhibitory protein to the polypeptides is decreased in the presence of the test compound, a decrease in said binding being an indication that the test compound inhibits the binding of myelin-derived-growth-inhibitory protein to the myelin-derived-growth-inhibitory protein receptors.
- 23. (Original) A chimeric protein comprising a ligand binding domain of NgR1 and a unique domain of NgR2.
- 24. (Original) The chimera of claim 23, wherein the chimera comprises amino acids 1-377 of NgR1 and 353-420 of NgR2.
- 25. (Original) The chimera of claim 23, wherein the chimera comprises amino acids 1-346 of NgR1 and 328-420 of NgR2.
- 26. (Original) The chimera of claim 23, wherein the chimera comprises amino acids 1-346 of NgR1 and 328-473 of NgR2.
- 27. (Original) The chimera of claim 26, wherein the chimera comprises SEQ ID NO: 19.
- 28. (Original) The chimera of claim 23, wherein the chimera comprises amino acids 1-314 of NgR1 and 315-420 of NgR2.
- 29. (Original) The chimera of claim 28, wherein the chimera comprises SEQ ID NO: 13.
- 30. (Original) A chimeric protein comprising a ligand binding domain of NgR2 and a unique domain of NgR1.
- 31. (Original) The chimera of claim 30, wherein the chimera comprises amino acids 1-352 of NgR2 and 378-473 of NgR1.
- 32. (Original) The chimera of claim 30, wherein the chimera comprises amino acids 1-327 of NgR2 and 349-473 of NgR1.

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- 33. (Original) The chimera of claim 32, wherein the chimera comprises SEQ ID NO: 17.
- 34. (Original) The chimera of claim 32, wherein the chimera comprises amino acids 1-315 of NgR2 and 314-473 of NgR1.
- 35. (Original) The chimera of claim 34, wherein the chimera comprises SEQ ID NO: 11.
- 36. (Original) A chimeric protein comprising a ligand binding domain of NgR3 and a unique domain of NgR2.
- 37. (Original) The chimera of claim 36, wherein the chimera comprises SEQ ID NO: 15.
- 38. (Original) A chimeric NgR1 protein comprising the MAG binding motif of NgR2.
- 39. (Original) The chimeric protein of claim 38, wherein the chimera comprises amino acids 1-314 of NgR1 and 315-327 of NgR2, and 354-473 of NgR1.
- 40. (Original) The chimera of claim 38, wherein the chimera comprises SEQ ID NO: 21.
- 41. (Original) The chimera of claim 38, wherein the chimera is soluble.
- 42. (Original) A nucleic acid encoding the protein chimera of claim 23.
- 43. (Original) A nucleic acid encoding the protein chimera of claim 30.
- 44. (Original) A nucleic acid encoding the protein chimera of claim 37.
- 45. (Original) A nucleic acid encoding the protein chimera of claim 38.
- 46. (Original) A method of inhibiting MAG-NgR2 complex formation comprising contacting the complex with an agent that disrupts sialic acid dependent binding to a receptor for a myelin-derived-growth-inhibitory protein.
- 47. (Original) The method of claim 46, wherein the agent is *Vibrio cholerae* neurominidase.
- 48. (Original) The method of claim 46, wherein the agent is tunciamycin.
- 49. (Original) The method of claim 46, wherein the agent is ganglioside GT1b.
- 50. (Original) A method of modulating myelin inhibitor activity comprising contacting a myelin-derived-growth-inhibitory protein with the chimera of claim 38.
- 51. (Original) A method of treating a central nervous system disorder in a subject comprising administering to the subject an effective amount of the chimera of claim 38.

52-61. Canceled

- 62. (New) An isolated molecular complex comprising a first isolated receptor protein for a myelin-derived-growth-inhibitory protein or fragment thereof and a second isolated receptor protein for a myelin-derived-growth-inhibitory protein or fragment thereof.
- 63. (New) The isolated molecular complex of claim 62, wherein the first isolated receptor protein is NgR1.
- 64. (New) The isolated molecular complex of claim 62, wherein the second isolated receptor protein is NgR2.
- 65. (New) An isolated molecular complex comprising proteoglycan, an isolated receptor protein for a myelin-derived-growth-inhibitory protein or fragment thereof, and a fibroblast growth factor (FGF).
- 66. (New) The isolated complex of claim 65, wherein the proteoglycan is a herparan sulfate bearing proteoglycan.
- 67. (New) The isolated complex of claim 66, wherein the herparan sulfate bearing proteoglycan is syndecan-3.
- 68. (New) The isolated complex of claim 65, wherein the myelin-derived-growth-inhibitory protein is selected form the group consisting of Nogo, MAG, and OMgp.
- 69. (New) The isolated complex of claim 65, wherein the FGF is FGF1.
- 70. (New) The isolated complex of claim 65, wherein the FGF is FGF2.
- 71. (New) The isolated complex of claim 65, wherein the FGF is FGF3.
- 72. (New) The isolated complex of claim 65, wherein the FGF is FGF4.
- 73. (New) The isolated complex of claim65, wherein the receptor protein is NgR1.
- 74. (New) The isolated complex of claim 65, wherein the receptor protein is NgR2.